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Final Research Report

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Measuring student attitude towards the application of
gamification in the higher education classroom

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Measuring students' attitude towards the application of gamification in the higher education classroom

1. ABSTRACT / EXECUTIVE SUMMARY

1.1 The research problem:

Modern day educators face a myriad of challenges with today's learners. The world has become a fast-paced environment with many distractions. Keeping learners focussed on in-class activities pose a challenge and a cellular phone is often an issue of contention and a burden on the concentration and focus of the learner.

Gamification is the process of incorporating game elements into non-game environments (Deterding, et al., 2014). Gamification has shown positive results in the field of education and others to bring about positive change, in engagement and interaction (Deterding, et al., 2014).

Using gamification, which incorporates elements and characteristics of games into every day actions, the goal is to investigate if it will capture the minds and imagination of students and help them better participate in class and help them to retain information more effectively.

Students' expressed incredibly positive feelings and emotions towards gamification and the themes picked up from the questionnaire showed encouraging emotions towards the effects and impact of gamification.

Considering the findings, gamification could be a very effective and useful tool in the higher education classroom. It could help with in-class challenges and help break through to students who struggle to concentrate in class.

2. INTRODUCTION

2.1 Context

The modern-day higher education classroom faces many new and challenging obstacles as the lecturer must compete for a student's attention in a high paced world where they are constantly bombarded with information. Recent studies have shown the negative impact that the cell phone has on student learning, with cell phone usage in class having a big impact on student participation and information retention (Felisoni & Godoi, 2018). The modern student is used to receiving information in an entertaining and interesting way, and the modern-day classroom has not adapted to this, still mostly staying with the traditional lecturer/student relationship, where the lecturer speaks and the student listens. As a lecturer is tricky to discipline a student that is technically an adult, and it can become a full-time job to constantly be monitoring cell phone use and apprehending the phone is not an option in higher education as it can be a school level. Other research indicates the short attention span of students in the class, declining rapidly after around 15 minutes into the class, this in combination with having a full day of classes often leaves students tired and distracted (Bradbury, 2016).

Gamification presents an interesting solution to these obstacles, as it introduces elements of gaming into non-gaming activities (Deterding, et al., 2014), as it attempts to make the activity more interesting and captivating for its audience. It requires the user to use game thinking, elements and mechanics found in gaming to solve problems, thus engaging the user more actively.

The gaming industry has seen massive growth, expected to reach a market size of \$90 billion by 2020 (WePC, 2019). One of the biggest companies on earth is a gaming company called Tencent, with people playing games on computers, consoles and lately cell phones (WePC, 2019). E-sport, which is competitive video games tournaments has seen a massive rise in popularity (Reuters, 2019), with it becoming a rival to real sports events and even receiving its own tv channel.

Different industries have applied gamification in an attempt to entice user engagement with interesting results (Scepanovic & Zaric, 2015). It is often used in advertising to make a campaign more interesting and engaging, some employers have used it in their companies to increase company morale and efficiency (Scepanovic & Zaric, 2015). Gamification is used to transform a stale practice to attempt to create new ways of doing things in an effort to leverage motivation and create a community (Scepanovic & Zaric, 2015). It has also been

utilised in areas such as e-commerce, social media engagement and lately in education (Scepanovic & Zaric, 2015).

For the purposes of my research, it is important to first define what Gamification is, and what it is not. Most research point to the work of Deterding for a definition, that Gamification is 'the use of video game elements in non-gaming systems to improve user experience' (Deterding, et al., 2014). In short, we use elements that are common in video games, to enhance non-game activities. A further popular source for the definition is that Gamification uses 'game-based mechanics, aesthetics and game thinking to engage people, motivate action, promote learning, and solve problems (Kapp cited in Buckley & Doyle, 2016)

Different theorists differ slightly on some elements, but there is an overall consensus that gamification typically include some of the following elements:

- **Tasks or activities** that are focussed on achieving a specific goal (Scepanovic & Zaric, 2015)
- **Point system** – the user can accumulate points to progress to the next phase (Kiryakova, et al., 2014)
- **Levels** – Different levels, often differ in difficulty (Kiryakova, et al., 2014)
- **Badges** – Rewarded for accomplishing a specific task (Kiryakova, et al., 2014)
- **Leaderboards** – Open scores of all participants to be viewed by everyone (Kiryakova, et al., 2014)
- **Ranking** – titles earned by participants to distinguish themselves (Nacke & Deterding, 2016)
- **Learning loops** are created, where students get quick feedback and can improve their work (Nacke & Deterding, 2016)

It is clear that the current educational setup already features a lot of similar aspects to that of Gamification, we progress through our studies by completing subjects and levelling up through the course to eventually graduate, these similarities make Higher Education and Gamification a good combination.

These are terms often confused with Gamification that should be excluded from the study:

- Boulet (2018) draws the important distinction between Gamification and “**Serious Games**” and explains that Gamification doesn’t change the course or instructional material but merely packages it to be ‘game-like’, where serious-games are the use of a game environment to teach a ‘serious subject’.
- Gamification should also not be confused with ‘**Game Inspired Design**’, which uses ideas found in games for design but does not add the different elements as Gamification.
- Another field generally confused with Gamification is ‘**Game-Based Learning**’ that integrate games into the learning process for the goal of teaching a specific skill or achieving a specific goal (Scepanovic & Zaric, 2015).
- ‘**Simulation**’ is where real-world activities get simulated by games for training purposes (Mohamad, et al., 2018).

2.2 Research Rationale

No previous study could be found, that explored the results of a mix of Gamification elements, in a South African Higher Education setting, using a qualitative research methodology. By conducting this research, we might find new ways to teach, aiming towards better student engagement and active learning. Furthermore, this research could create awareness around Gamification and its benefits and expand a lecturer’s approach and tactics.

2.3 Population:

- **Unit of analysis:** The unit of analysis is comprised of people, more specifically students (Du Plooy-Cilliers, et al., 2018). The focus of the student is on students and this population is very diverse in terms of gender, race and cultural background.
- **Target Population:** The target population consists of students in higher education (Du Plooy-Cilliers, et al., 2018). The study is focussed on student motivation and this population fits in perfectly with the research’s scope and goals.
- **Accessible Population:** The accessible population consists of four groups of students in a higher education class (Du Plooy-Cilliers, et al., 2018)
- **Population Parameters:** (Du Plooy-Cilliers, et al., 2018)
 - **Campus:** Varsity College Sandton.
 - **Faculty:** Higher Certificate Business Practises

- **Module:** Introduction to Academic and Digital Literacies (IADL5111) – this module could be very beneficial but often students don't find it very engaging, this adding an element of gamification might motivate them to participate, leading to better engagement.
- **Characteristics:** Groups can consist of students of different ages, but mostly its students that graduated high school the previous year. They are digital natives and should feel comfortable with the technological elements of Gamification, especially considering its use of the mobile phone.

2.4 Aims:

Assess student reaction to Gamification, it needs to be determined if the application thereof has a worthwhile effect on the student. Then to determine if they are more inclined to attend class because of Gamification, this is a constant struggle in higher education and if Gamification could assist it would be beneficial. Determine if they are more inclined to completed tasks with Gamification, as some students are often reluctant to participate in class. Interpret which elements of Gamification are more effective, there is a variety of options that could be useful. And then to interpret if Gamification really did any anything to the class and whether it helped students understand the subject better or found it more engaging.

3. LITERATURE REVIEW

A great article on the matter 'Gamification in Education' (Kiryakova, et al., 2014) refer to today's students as 'digital natives' and that Gamification has the power to grab this generations' attention. They combined some terms from different sources and summarised an overlap of important concepts to consider Users, Challenges/Tasks, Points, Levels, Badges and Ranking.

The article makes reference to Gabe Zicherman (cited in (Kiryakova, et al., 2014) that found learners are 40% more effective through the use of Gamification. The study uses a platform named 'Moodle' to implement some gamification features which could be considered for this research paper, they implement elements such as User's Avatar, Progress tracker, Quizzes, Levels, Feedback, Badges and Leaderboards.

There are a variety of free and available online sources that could help in my research, this research will choose which would best be able to help build a constructive course and lesson plan.

Another insightful article comes from Hungary, in the International Journal of Advanced Computer Science and Applications (Varannai, et al., 2017), they focussed heavily on using an open sources app and website name 'Kahoot' to have quizzes in class. They found that students adapt to the new technology quicker if it's simplistic and they can recognise the benefits. Varannai, et al (2017) argues that through the use of Kahoot, they found it engaged students intrinsic and extrinsic motivational factors. Sailer, et al., (2016) explores why gamification is successful in motivating participants and researched the impact of specific elements and their psychological effects. Their research showed that by applying the different elements of gamification, lead to different results and varying degrees of effectiveness (Sailer, et al., 2016). Students enjoy the quizzes and they are engaged on a different level than with a traditional test, shifting the focus more to the process than the results, which causes student to not think of it as a test and not fear the process (Limeade, 2020). Intrinsic motivation focusses on personal internal rewards rather than on external prizes or awards, it increases student motivation and curiosity and could lead to better educational outcomes and results (Limeade, 2020). The Kahoot platform is free to use and a student only requires a smart device to become an active participant in class, so this could be an excellent platform to connect with the students that are on their phones in class anyway. The researchers in Hungary found the use of Kahoot and Gamification had positive results in class attendance, as they struggled with students attending fewer classes as the semester progressed.

There has not been a lot of research done on Gamification in South Africa, the one that was found was done at the University of Cape Town. The researchers from the University of Cape Town chose a group of Computer Science students because they would logically be able to more readily adapt to Gamification because they are familiar with computers and smart devices (O'Donovan, et al., 2013).

In their design of the Gamification for the course, they set out to achieve the following goals: increase engagement and motivation, enhance attendance and participation and enhance course material understanding and develop problem-solving skills. They used an online tool called Vula and developed classroom activities to attempt to motivate students (O'Donovan, et al., 2013) and improved grades compared to previous years that didn't apply Gamification. They experienced an improved class attendance compared to the course average and overall positive feedback from questionnaires given to students, in which students added they would have enjoyed more focus on teamwork through the course. Because the lecturers and students are from the world of computer science, a lot of the Gamification elements used received a lot of specialised attention that lectures outside of the field would

not easily be able to replicate, they also paid for a few elements to be done professionally, my aim would be to simplify the process, so that lecturers and students that are outside of the obvious computer courses can easily build and participate in Gamification as well.

Out of Ireland came the study 'Gamification and student motivation' (Buckley & Doyle, 2016). They explore the element of competition that gamification encourages students to motivate them. According to Khaled and Nacke (cited in Buckley & Doyle, 2016) students become motivated by the feeling of competition as their scores are public and they can see each other's scores and progression through the course. Buckley & Doyle (2016) argue that a big part of a lecturers' or teachers' job is to motivate learners, and that being motivated leads to better outcomes for the learner. They identify that the two main motivators as being intrinsic and extrinsic (Buckley & Doyle, 2016), extrinsic motivations in this regard would be students who view education as a means to an end, and intrinsically that students are involved, interested and engaged with their learnings. Bénabou and Tirole (cited in Boulet, 2018) agreed that Gamification would enhance a learner's extrinsic motivation specifically. Their research question explores how different students are motivated and how Gamification impacts their learning. Their research findings showed a statistically increase in achievements among the students and a positive impact on the learning outcomes.

The Swedish University of Agricultural Sciences explore Gamification in Higher Education as a means to engage and motivate students (Langendahl, et al., 2016) and they regard it as a pedagogic approach. Their framework had three gaming elements that they explore, namely surface elements, underlying dynamics and gaming experience (Langendahl, et al., 2016). They presented the students with challenges immediately and attempted to remove them from their comfort zones (Langendahl, et al., 2016), they also made use of a narrative story to guide the students throughout the course.

Their findings showed that Gamification can help to engage and motivate students, but that it does not increase teaching effectiveness, nor does it reduce the curriculum workload (Langendahl, et al., 2016). They warn against using Gamification to the extent that it could do harm to the students learning objectives, but if used correctly it does have a positive influence overall if it is consistent with the learning goals of the subject (Langendahl, et al., 2016).

Boulet (2018) is one of the very few researchers that don't believe Gamification to be the next step in educational development. He argues that Gamification is not at all a new

concept and have been applied in some forms for many years to attempt to motivate people. Robertson (cited in Boulet, 2018) says that a better term for Gamification would be 'pointsification'. Deci & al (cited in Boulet, 2018) argues that rewards or points could negatively impact a students' intrinsic motivation. Hanus and Fox (cited in Boulet, 2018) experimented by giving a group of learners a gamified curriculum and another group the normal curriculum, and they found that the Gamification had a negative impact on motivation and course satisfaction. Bogost (cited in Boulet, 2018) warns not to replace real incentives with fictional ones, and that Gamification does not make a boring subject any more interesting than it already is. Boulet (2018) argues that Gamification ultimately distracts from real learning by artificially and temporarily exciting learners but that it has no lasting effect. Boulet (2018) raises a few valid concerns to look out for when conducting the research and that steps should be taken to avoid certain pitfalls along the way. It is important that the elements of Gamification that gets used in the research do not overshadow the course and that it is possible to overdo the research and it backfired.

Researchers exploring both the possible pros and cons of gamification in Romania warn that overdoing Gamification or using it incorrectly could have negative results. They set up different Gamification inspired elements using the Moodle platform. The findings show that in the case of Gamification you could possibly make play mandatory and that scares students off the concept (Furdu, et al., 2017). Further precautions should be taken to make sure students are rewarded for the attempts and efforts and not only for mastering the content (Furdu, et al., 2017). They encourage that students should accept failure and see it as an opportunity to learn and grow (Furdu, et al., 2017). There should be a balance between learning and play and students should not be focussed on the play alone, it should be carefully compiled and set up as to not become repetitive, mundane or pointless (Furdu, et al., 2017). This raises good points and something to consider when planning the experiments, the course work should still be the main focus and the Gamification should be used to amplify it and not distract from it. Generation Z quickly becomes bored, especially if they feel pandered to, the Gamification elements should not be overly childish or silly.

Researchers in Serbia found that students reacted positively to experiences points, badges, leaderboards and feedback, but negatively towards time tracking that the attempted and the students felt building avatars did not add or take away from their experience (Scepanovic & Zaric, 2015). (Scepanovic & Zaric, 2015) found in their research that especially leaderboards generated a strong sense of competition and motivation among the students, on the other

hand, it might create negative emotions with students that find themselves at the bottom of the list so it should be thoroughly considered and implemented.

A good example outside of education for this would be the popular online prediction game Superbru.com, where users can predict the outcome of different sporting events to participate against their friends. Superbru uses a Leaderboards for players to constantly keep track of their progress compared to others. A platform like this might be useful to analyse to see what they are doing successfully to encourage healthy competition.

Research out of Spain wanted to focus on what the lectures' thought was on Gamification and how they actually used it in their classrooms (Martí-Parreño, et al., 2016). Their findings showed a slow uptake to implement Gamification elements but that there was an overall positive experience for the lecturers that did implement it, they also further showed no gap in attitude between age, gender or if the institution was private or public among lecturers. According to Hanus and Fox (cited in Martí-Parreño, et al., 2016) Gamification supports the technique of 'scaffolding' learning material for a student based on their needs. (Martí-Parreño, et al., 2016) points out that three obstacles stand in the way of lecturers being positive about gamification and that is time constraints, not having the necessary training or lack of funds.

This is an important aspect to consider as we mostly only look at Gamification from the point-of-view of the student, but if it creates more obstacles for lecturers, they are bound to develop a negative attitude towards it and that would either negatively impact the results or they will go back to the traditional classroom techniques. It is therefore important to find cost-effective and easy to use ways for lecturers to incorporate Gamification, without having to spend more time on the development of their lesson plans.

Yildirim (2017) uses a combination of quantitative and qualitative methods to determine what students' attitudes are towards Gamification applied in the classroom. They found common results among students that were mostly positive, students specified they found the points system to be useful but didn't like having to repeat elements until they got it right (Yildirim, 2017). They suggest that it would be important to first determine different criteria of students and then adapting the Gamification elements to fit the best (Yildirim, 2017).

Out of Malaysia come research to find if Gamification increases student engagement in learning (Mohamad, et al., 2018). They allowed students to resubmit and fix assignments in order to get a better mark after receiving feedback, students this feel free from failing and

make an effort to better their work until a satisfactory level has been achieved (Mohamad, et al., 2018). They did thorough cross-platform research and found that Gamification can be used to encourage and develop students' interaction and comprehension of the study material (Mohamad, et al., 2018).

A more controversial theory of Gamification was tested by Landers and Callan (cited in (Rabah, et al., 2017), students are offered a choice, as 'Freedom of choice' is Gamification element that features less in Education. They gave students the choice between different formats of taking assessments and they are also given the opportunity to resubmit assignments to achieve a better mark as Gamification also promotes learning from feedback and not limiting the number of attempts a student can make.

Rabah, et al. (2017) also states that it is important to carefully access the means of determining if Gamification was effective or not because there are different ways of interpreting it. According to Rabah, et al. (2017) some researchers look at the feelings towards and attitudes of students about Gamification, where others are more concerned with the actual cognitive learning that took place and whether it saw an improvement through Gamification.

It would be important to firmly establish how one would want to measure the effectiveness of Gamification and what the goals of the experiment would be, the setup of the platforms and construction of the lesson plans would then have to follow accordingly.

Rabah, et al. (2017) states that they are worried that there exists a bias in the field of Gamification that only positive results get reported, and that researchers are only looking for positive results. They are concerned that the emotions of the students are ignored, and that Gamification might induce feelings of frustration and anxiety because students are being publicly compared to their peers.

Research should make provision to test what emotions are stirred within students with Gamification and the good aspects should be considered with any possible bad aspects as well.

Sherlock (2017) argues that Gamification creates a conducive environment for learning because game elements allow the student to retry tasks, they are not forced to guess if they don't know the answer, this allows them to be more creative and experimental. Sherlock (2017) further states that it is important to consider carefully what rewards system to put in place for students that play the game and that there could be the option of rewarding of prizes rather than pitting students against one another.

These prizes should be carefully considered not to distract from the course material, in my own experience offering a chocolate as a reward for a quiz does seem to have an immediate positive effect on student involvement and participation, but the argument could be made that there will not be a long-lasting positive effect of learning and that students are only after the short term gains. However, if the students are motivated by a piece of chocolate to learn, and actual learning takes place, that could be an interesting situation to face. However, some thought should be given to more concrete reward structures, to reward top-scoring students but not disadvantaging students with lower scores.

Sherloc (2017) warns against the possibility of trivialising important issues through Gamification, that students become swept away by the gaming aspect of it all and forget about the actual work and recommends that this must be considered when structuring the course.

Structuring the course and lesson plan should be done with care, the game should never become the sole focus but should only be a tool to enhance the course material, here it is possible that Gamification might not work in any subject or any classroom, as some subjects might not lend itself to be easily gamified.

Elements of gaming have been identified that can be used to make a non-gaming activity more engaging and entertaining are: Focussed tasks - making activities goal focussed in the same way games are, where participants are directed to achieve a specific predetermined set of goals (Scepanovic & Zaric, 2015). Point system – attributing scores to activities and goals so participants can see their progress and engage in competition with their peers (Kiryakova, et al., 2014). Levels – have participants 'level up' as in games if they achieve enough points or other scoring systems (Kiryakova, et al., 2014). Badges – awarding participants with badges to reward them for achieving a goal (Kiryakova, et al., 2014). Leaderboards – using points systems to establish leaderboards so participants can actively compete against one another and visually see their placement among their peers (Kiryakova, et al., 2014). Ranking – awarding participants with ranks and classifications based on progression or point accumulation (Nacke & Deterding, 2016). Learning loops – games make provisions for participants to at any time check back to the rules if they need to better understand something, gamification need to provide participants with the same benefit (Nacke & Deterding, 2016).

4. PROBLEM STATEMENT

Gamification is the process of incorporating game elements into non-game environments (Deterding, et al., 2014). Gamification has shown positive results in the field of education and others to bring about positive change, in engagement and interaction (Deterding, et al., 2014). The studies were done on Gamification so far has mainly focussed on a single element, and very few local studies have been done. Selecting the right mix of elements and testing their impact on a higher education classroom in South Africa could have rewarding results.

In my research I want to explore, practical, ways for lecturers to use Gamification in the classroom, to further student engagement in almost any classroom in higher education. The goal of the research is to test student motivation and participation, but additional benefits could include better class attendance and ultimately improved performance in their grades, although this research does not explore the latter. The idea would be for the lecturer not to have any specialised skills to be able to utilise it themselves without the help of a third party. It should be easily adaptable for a specific classroom's needs and what elements to use should be up to the discretion of the lecturer. Develop a course and lesson plan using the elements of Gamification that prior research has shown to be most effective, whilst being careful to implement elements that preceding research has deemed risky. I see no need for applying all the elements to the classroom, but rather cherry-picking the best ones.

5. RESEARCH METHODOLOGY

5.1 Interpretivism

I will be following the interpretivism philosophy of doing research, as my study is to do with the ways humans react and it is not directly measurable (Du Plooy-Cilliers, et al., 2018). Attempting to see through the eyes of the students, trying to ascertain what is deterring them from participating in class and applying Gamification to see what reaction it causes in the students.

5.2 Analysis of research approach

The research aims to achieve an understanding of something, rather than a measurement, as human and social sciences cannot be accurately measured by data but require human interpretation (Pham, 2018). It attempts to see experiences from the view of the subject and incorporates cultural context into the finding and analysis (Pham, 2018). Interpretivism considers an objective reality and the goal is to gain insight into the everyday lives of respondents (ReviseSociology, 2015). The interpretivism process values validity over

reliability and allows the research to be led by the respondents (ReviseSociology, 2015). It believes the individual has an impact on the fabric of society (ReviseSociology, 2015). It uses a qualitative method (ReviseSociology, 2015) and gathers non-numerical data (Du Plooy-Cilliers, et al., 2018).

5.3 Qualitative Data Collection

For my data collection, I will be conducting focus groups at the end of the study to determine how they experienced to the implementation of gamification into the coursework.

- Qualitative data collection is not interested in the numerical values of the data but in the experiences and thoughts of the respondents (Du Plooy-Cilliers, et al., 2018).
- The aim is to understand and not to measure (Du Plooy-Cilliers, et al., 2018)

5.4 Questionnaire

- Nearing the end of the semester, I will send out questionnaires to students to determine and interpret their experience of gamification.
- I will select a few questions for them to answer on a slide scale to determine their experience in different aspects of gamification and ask for feedback from their points-of-view.

5.5 Qualitative data analysis

- Data will be analysed using content analysis. Content analysis is used to explore and identify themes and patterns in the collected data (Du Plooy-Cilliers, et al., 2018).
- Inductive content analysis will be employed, and will assist in building a theory based on the data collected from the students (Du Plooy-Cilliers, et al., 2018).
- It would require the construction of a coding scheme and analysis (Du Plooy-Cilliers, et al., 2018).

6. FEASIBILITY

A Gamification study is indeed doable and would not require additional or costly resources or additional time for completion, the potential outcomes of the research makes it justifiable a worthwhile and realistic undertaking (Du Plooy-Cilliers, et al., 2018).

The factors contributing to making this specific study feasible are as follows:

- No extra time required
- No special budget required
- The challenge it wants to solve is a real problem for educators
- Timeframe is the semester the class is running
- Free apps and resources are available to use

6.1 Application

6.1.1. The module

The study was done with students of Varsity College Sandton, studying towards a Higher Certificate in Business Practices. The subject is 'Introduction to Academic and Digital Literacies' (IADL5111). The module is designed to help students strengthen their academic abilities, developing skills like topic analysis, examining the assignment process and helps students with referencing and writing skills (The IIE, 2020).

The main summative assessment for the subject is a Portfolio of Evidence that the students work on during the semester and submit after the subject has ended.

6.1.2 Quizzes

To enhance classroom attitude and mood, formative testing will be conducted using the Kahoot tool (Kahoot, 2020). Kahoot is used to set quizzes that will be taken in class. Kahoot motivates students on an intrinsic and extrinsic level (Varannai, et al., 2017), making tests more interesting and fun for the students. With Kahoot the lecturer will set the quiz, project the questions in the front of the class, while students answer the questions using their mobile phones (Kahoot, 2020).

A benefit of Kahoot quizzes is that there is a pause between each question, in which the results are shown, it uses an element of the leaderboards characteristic of Gamification, but it only shows the top answers in the class, and not the whole group. Which results in positive encouragement for students as they want to compete for the top spot, but it doesn't shame students who might have gotten the answer wrong and does not cross ethical lines. This gives the lecturer the opportunity to immediately give feedback on a question and see how many of the students gave the incorrect answer.

Students who either missed the quiz or chose not to participate would have the option to take the test on the IIE online platform VCLearn, also receiving the same feedback after each question via the system. Students who want to improve on their score will also be allowed to retake the test.

6.1.3 Tutorials

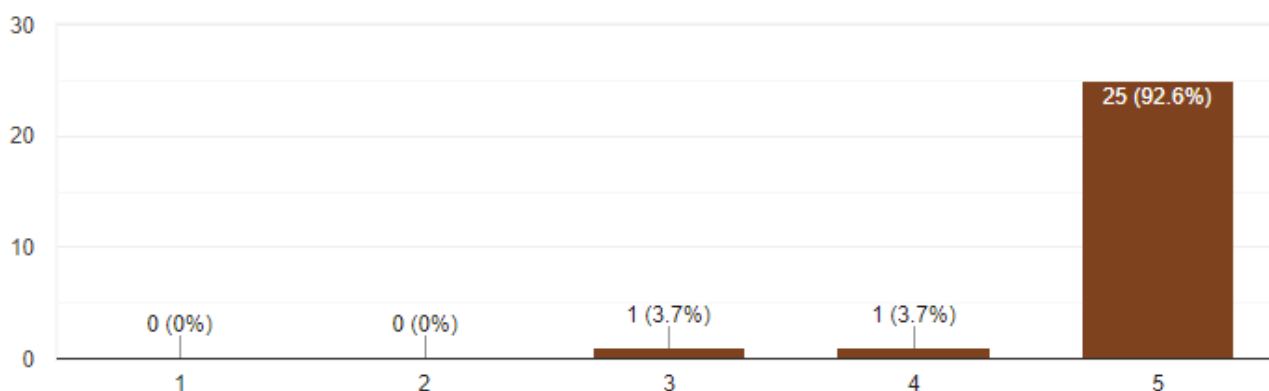
In a game, at any time, a participant should be able to review the rules or stand back and evaluate the game. Video tutorials of all the important elements of the subject will be made available for students to view or download from VCLearn. In this way a student can check back at any time to refresh on elements of the subject. This will also be beneficial for students who might have registered late or missed class.

7. ANALYSIS AND DISCUSSION OF DATA AND FINDINGS

The research was conducted using Google Forms (Appendix A). Students received five questions and were asked to make a recommendation or offer critique. Questions were presented on a sliding scale, with 1 being the lowest possible response and 5 being the highest. Only students that were present during the gamification were asked to participate, as students who missed it, would not be able to give a judgement for or against gamification. In total, 27 students responded to the questionnaire over 4 different groups, which considering the situation, is regarded as very satisfactory.

7.1 Boosts enjoyment

Question: Did you enjoy the gamification elements introduced into the IADL subject?



The feedback from the students is overwhelmingly positive, with the vast majority of students saying they really enjoyed gamification elements incorporated into traditional classroom activities. 92.6% of the students indicated the maximum level of enjoyment. Zero students indicated the bottom two options of enjoyment, and only didn't select the maximum option.

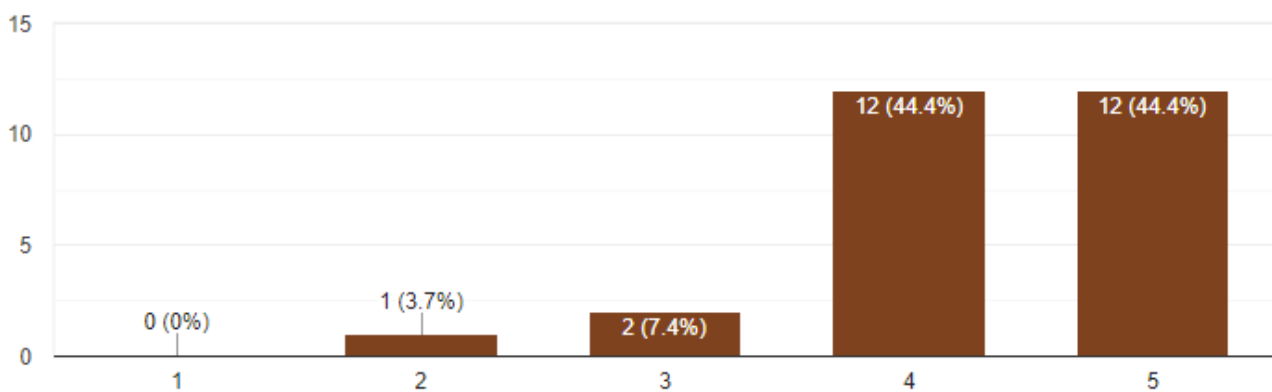
The classroom atmosphere was visibly excited during the gamification application. The introduction of something new and unexpected clearly thrilled and intrigued students and the instruction to take out their phones was initially met with laughter as it is the contrary to what most lecturer instructions. In some classrooms, I observed the enthusiasm leading to students standing at their desks in anticipation for a new question. In one classroom the students even moved to the front of the class to sit closer to the board, in an attempt to gain an edge on their peers. The elation after each question to see who got the top spot could be seen and felt in the classroom, accompanied with cheers, and bragging of the student who scored the highest on each round.

This links well with existing research that people enjoy the addition of gamification to areas that previously did not include it and that it can be used to make current practises more

entertaining and memorable (The Good Schools Guide, 2019). Strong themes emerge of the enjoyment and satisfaction that gamification creates among the students. Gamification has been proven to increase the enjoyment of the action it is amplifying in areas of marketing or customer engagement, and the reaction from the students are in-line with this (Scepanovic & Zaric, 2015). Respondent 9 stated *“I enjoyed the elements of gamification a lot”* and Respondent 12 said *“It’s really fun and keeps us active in class”*. Both comments align with the expected contributions of gamification, in that it creates an atmosphere where students are more excited to participate with the work

7.2 Enhanced learning experience

Question: Did you find that you remembered the content of a test more if it was done in Kahoot Quiz form?



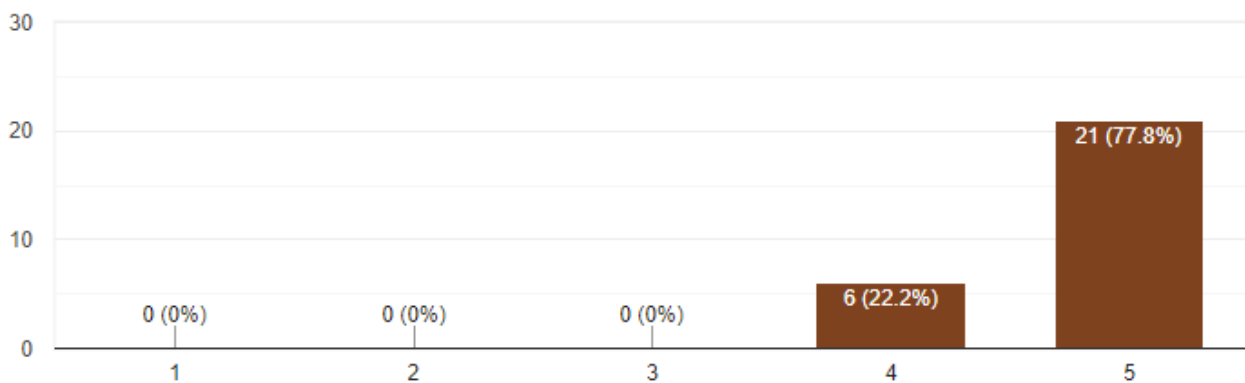
44.4.% of students selected the highest option and 44.4% the second highest. The students responded very positively regarding the retention of information and that gamification assisted them in recalling work more efficiently. Respondents indicated that they experienced a better recall of items covered during the application of gamification compared to the same action without. The classroom atmosphere was incredibly positive, with winners being congratulated, and students wanting to give the right answer, so that their name would appear on the board. The student who gave the wrong answer were not singled out and no ethically sensitive situations presented.

Current research indicates that gamifications is beneficial to the learning environment, creating a more relaxed atmosphere and engaging students more actively (eLearning Industry, 2015). This also leads to increased attention span and better memory retention, because of the nature of gamification and the benefits of its application and could ultimately lead to positive behavioural changes within student conduct and participation (eLearning Industry, 2015). Student comments were very encouraging on elements of learning experience. Respondent 10 stated *“I strongly believe that the gamification is very effective in a*

classroom. Learners stay focus throughout the quiz while we learn and have fun!”. Respondent 13 commented “It’s been very helpful”. Respondent 18 said “Good job sir, it helped greatly!”. Respondent 20 gave the feedback “I would ask the lecturer to encourage gamification more often because the students will become more engaged into the lecture and more students will join the class. It is a good way to install the knowledge by using gamification due to technology evolving today.” Respondent 23 said “I really enjoyed it and it makes everything easy to recall.” Comments on this question are very encouraging and students expressed views that they felt gamification could help them retain information and not merely enjoy it only for the sake of it. Students express themes that connect with research that gamification can be considered as a helpful tool to enhance learning.

7.3 Friendly competitiveness and motivation

Question: Did competing with your classmates inspire you to get the answers right in the Quiz?



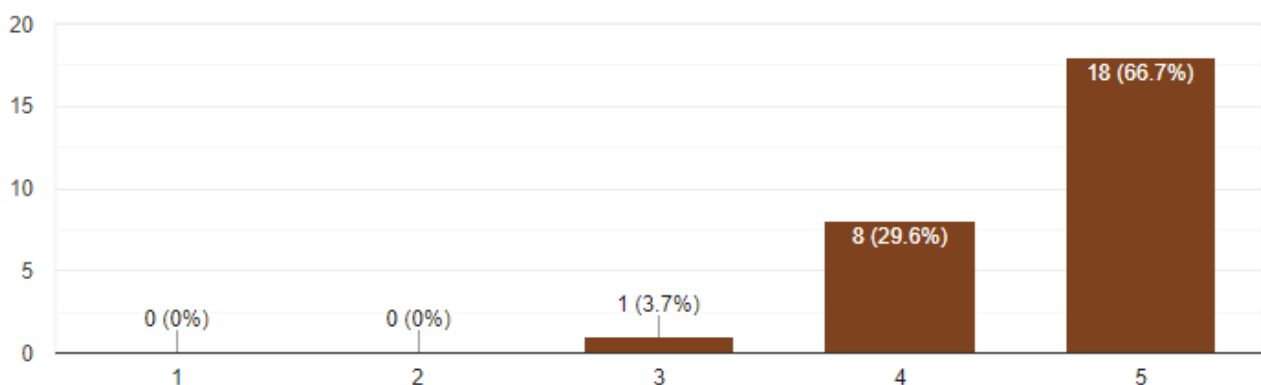
Students were very much in favour of the competitive elements of gamification and enjoyed the spirited rivalry. 77.8% of the class selected the maximum level on the sliding scale and 22.2% the 2nd highest level, indicating a very positive attitude towards friendly competition among peers.

Despite no physical prize being offered as reward for scoring highest on an individual question or achieving the most points at the end of the quiz, the students showed a high level of spirited competitiveness. The competition was on and student were excited to achieve the most marks after each round and see their names on the board, only the top three correct and quickest responded appeared on the board and no students were shamed for not getting an answer correct. I was surprised at the level of competitiveness and excitement shown but some students and this is a great indication that the influences of games are rooted in today’s young generation.

Gamification has been incorporated and applied into different industries as it creates a sense of competition that enhances the experience of the user (Deterding, et al., 2014). Taking working out and the gym as an example, users can track their visits and progress against a friend, creating a sense of competition in an otherwise solidarity activity. That same effect can be seen in higher education as the users or participants are more actively engaged in the activities (Deterding, et al., 2014). Respondent 7 said *“When you play games on work you’ve done, you would be motivated to study harder so that you could come out first in all the games”*. Respondent 15 commented *“Gamifications in classrooms are fun and are a great way to learn as students compete against each other (competition is healthy) and knowledge is easily processed into the brain as well and it gets easier to remember information. More of these should definitely be encouraged”*. Respondent 22 stated *“It’s a lot of fun and is a very good idea to keep us entertained”*. Previous research indicated that the element of competition within gamification needs to be handled delicately as to not become counterproductive and students with lower marks would feel shamed and the process would turn negative (Boulet, 2018). The comments from the students are very positive, indicating that if done right, friendly competition could be a good motivator for participation and challenges students to deliver better results. Feedback shows students attitudes are positive toward competition as a motivational element and consider the competition healthy and constructive.

7.4 Class Attendance and Participation

Question: Would the addition of Gamification have an influence on whether you attend class or not?



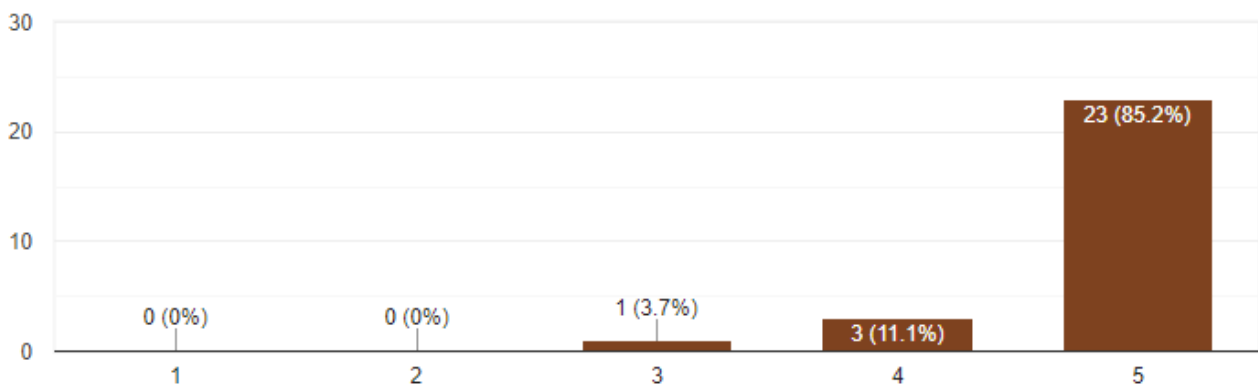
Students responded extremely positively. Taking into consideration this is what the students say and not a measurement if in fact there was a better attendance, but the response is still good start. The majority of students feel that they would be more likely to attend class if they knew gamification was being applied. 66.7% selected the maximum level to indicate their

conviction that gamification would have a positive influence on their class attendance. The goal of changing in-class test to gamification quizzes, is to try to and encourage students to attend class and not fear test taking. Because students can later retake test, the hope is that they can take risks and are not intimidated by the tests.

Research has shown participants or students to show behavioural changes and could approach things differently because of the impact of gamification (eLearning Industry, 2015). In some cases, the effects of gamifications even lead to a more constructive classroom and better classroom behaviours exhibited by students. Respondent 1 said *“We should have more Gamification implemented in our studies.”* Respondent 5 commented *“We should do more of Gamification.”* Respondent 6 stated *“We should have more gamification maybe every week.”* Respondent 8 said *“More should be done, at least once after every new topic.”* Without a question that guided them, students expressed their desire that more of their modules feature gamification. This is a very positive indication of their enjoyment of the process and that they consider it beneficial as well. That positive attitude could then lead to better class attendance and in-class participation

7.5 Feedback Loop

Question: Did it help to receive immediate feedback after each Quiz question?



Students showed a positive response to the fact that gamification offers a very quick feedback loop on assessments. 85.2% of selection option 5, to indicate their satisfaction with receiving feedback after every question.

Normal procedure would have the lecturer give out the test, mark it, and later return it. But with the quiz, the lecturer can pause between each question and provide immediate feedback, which was extremely helpful. Some answer to questions was way of the mark and it provided a safe opportunity to address it right after the student made the mistake, to try and help them understand the work better. As a lecturer I enjoyed the fact that I could

immediately address the class after each question, being able to show the breakdown of each question and how many students answered which multiple choice option. Here I could discuss why their answers are wrong and identify any problem areas that might appear.

The element of speedy feedback or a feedback loop within gamification can be very useful in higher education (Nacke & Deterding, 2016). For increased learning to take place, gamification provides for quicker feedback to the user, and that linked well with in class feedback after each question. Clear themes emerged of that correlated with previous research, that gamification is beneficial to learning and that the learning loop creates quick and effective feedback. This encourages learning and increase memory retention.

8. ETHICAL CONSIDERATIONS

Participation by students was completely voluntary and there were no problematic ethical considerations that hindered the study of gamification. Questionnaires did not report any identifiable features of participants and no student was negatively impacted for partaking or choosing not to. New IIE policy for ICE test requires student to give a worthwhile effort towards the test and are rewarded with full marks for their submission. This aligned well with the arrangement made with students, that they can retake a quiz in the form of a normal test if they were not happy with their score and could retake it as many times as they wanted to.

8.1 Non-participating students

Students that were not able to attend class, or chose not to participate, were still provided for and were able to take tests, do tasks and activities in a different format.

8.2 Ethical principles

Minor problematic issues with some elements of gamification were avoided. Learning from previous studies conducted, it was decided that students' scores would not be made public for all their peers to see and compare. All ethical principles as stipulated were adhered to.

9. LIMITATIONS OF THE STUDY

9.1 Scope: The research is done on a rather small sample size using only one module, on one campus, giving it a limited range for possible insights.

9.2 Logistical: Students who do not attend lectures will not experience the impact of gamification, therefore only students with a good class attendance will be considered for feedback. This would potentially impact the number of participants as it limits the number of students who can participate in the study.

Some of the applications would require students to work on their cellular phones or laptops in class and use data, the campus has Wi-Fi, but in the case of it being down or slow it would cause problems for that specific exercise or task.

9.3 Resources: As there is no budget for this study, I will depend on whatever free resources I can find online which might not necessarily be the best out there. There are apps and programs that are very customisable for applying gamification, but the study would be limited to only applications that are available for free, limiting the options.

9.4 Lockdown (Covid-19): The national lockdown as a result of the novel coronavirus in South Africa led to the sudden and unexpected suspension of all academic activity. This occurred only after a few weeks into class and severely limited the scope of this research. As it coincided with the actual experimentation phase of this research project the duration of the study was cut short and the scope limited in breadth. Due to lockdown, conducting focus groups were not possible and had to be changed to an online questionnaire. Due to the nature of the research it will still be done in an interpretivist and qualitative manner.

10. ANTICIPATED CONTRIBUTIONS OF THE STUDY

Some of the potential benefits of applying gamification to a higher education class, includes enhanced learning experience (eLearning Industry, 2015) because Gamification could add to student learning, by overcoming modern-day obstacles and actively engaging students. It provides for a better learning environment in that Gamification would create a more engaging environment for students (eLearning Industry, 2015). The feedback loop element of gamification promotes that feedback is constructive and immediate, resulting in speedy feedback. Studies have shown that students exhibit positive behavioural changes due to application of gamification (eLearning Industry, 2015). Gamification could assist in the attention span of students and overcome any boredom they might experience in the subject (Edsys, 2019). Gamification could achieve making the subject enjoyable for a student and thus engaging them more actively (The Good Schools Guide, 2019).

This generation is used to games and should identify and connect with some of the elements and respond positively to it (The Good Schools Guide, 2019). Some studies have shown the benefits of gamification extended beyond the classroom, used either to help students learn at home or in part-time or distance courses (The Good Schools Guide, 2019). It will minimise disruptive behaviour, some students become disruptive when not engaged in class and distract the lecturer and fellow students, with them being more actively engaged this could be lessened (Concordia University, 2013).

11. CONCLUSION AND RECOMMENDATIONS

The most significant results were the very positive feedback on the questionnaire, with most of the questions showing students reactions at the maximum level of positivity. The takeaways and themes that emerged was a was a high enjoyment factors of gamification, but also that the students felt it added to their concentration and boosted their memory retention on the work covered. Students feel they would be more inclined to attend and participate in classroom activities if gamification is being applied. They enjoyed the competition with their peers and felt that it would encourage them to get more answers correct. Students also appreciated the quick learning loop and that they received immediate feedback after every question and can quicker learn from their mistakes.

A remarkably interesting factor that came to light during this research project, is the effects and motivation that students exhibited from experiencing friendly competition. Motivating students is a massive challenge, and this could be further looked at beyond gamification, to find other ways to utilise competition between students.

Due to the lockdown caused by covid-19, the length and breadth of this study was narrowed and shortened. Future studies might benefit from spanning a whole academic semester and be integrated more thoroughly and incorporate more aspects of the curriculum. Gamification could also be utilised to strengthen online learning and would be worth exploring its strength and weaknesses in the online environment.

Based on what was learned from this study, future studies could have a more quantitative approach and measure whether student participation and class attendance stand to be improved through the application of gamification. It would also be interesting to measure if there are any changes in grade averages because of the application of gamification. Gamification has other elements that this study was unable to include because of the lockdown, and future research could look at incorporating other elements and their effects on students.

Students showed very positive reactions and attitudes toward the application of gamification in the classroom. The excitement and positivity in the classroom were palpable and energetic. The research showed very positive responses towards gamification and an interest from students to see it increased and extended further into their studies. The research question was definitely answered, and other possibilities and areas of interest arose from the study.

12. REFERENCES

- Boulet, G. 2018. Gamification is simply bells and whistles. *eLearn Magazine*, 11(2016).
- Bradbury, N. A. 2016. Attention span during lectures: 8 seconds, 10 minutes, or more?. *American Physiological Society*.
- Buckley, P. & Doyle, E. 2016. Gamification and student motivation. *Interactive Learning Environments*, 24(6), 1162-1175.
- Concordia University, 2013. *Five benefits of adding gamification to classrooms*. [Online] Available at: <https://education.cu-portland.edu/blog/classroom-resources/five-benefits-of-adding-gamification-to-classrooms/> [Accessed 21 November 2019].
- Deterding, S., Dixon, D., Khaled, R. & Nacke, L. 2014. Gamification: using game design elements in non-gaming contexts. *Proceedings of the 15th International Academic MindTrek Conference*, 9–15.
- Du Plooy-Cilliers, F., Davis, C. & Bezuidenhout, R. 2018. *Research matters*. Cape Town: Juta.
- Edsys, 2019. *Benefits of gamification in learning and instruction*. [Online] Available at: <https://www.edsys.in/benefits-of-gamification-in-learning-and-instruction/> [Accessed 21 November 2019].
- eLearning Industry, 2015. *6 Killer examples of gamification In eLearning*. [Online] Available at: <https://elearningindustry.com/6-killer-examples-gamification-in-elearning> [Accessed 21 November 2019].
- Felisoni, D. D. & Godoi, A. S. 2018. Cell phone usage and academic performance: An experiment. *Computers & Education*, Volume 117, 175-187.
- Furdu, I., Tomozei, C. & Kose, C. 2017. Pros and cons gamification and gaming in classroom. *Broad Research in Artificial Intelligence and Neuroscience*, 8(2).
- Kahoot, 2020. *Make learning awesome*. [Online] Available at: <https://www.kahoot.com/> [Accessed 2 April 2020].
- Kiryakova, G., Angelova, N. & Yordanova, L. 2014. Gamification in education. *Proceedings of 9th International Balkan Education and Science Conference*.
- Langendahl, P.-A., Cook, M. & Mark-Herbert, C. 2016. Gamification in higher education - toward a pedagogy to engage and motivate students. *Bogost*, 2016(6).
- Limeade, 2020. *The power of intrinsic motivation*. [Online] Available at: <https://www.limeade.com/en/blog/watch-webinar-on-demand-the-power-of-intrinsic-motivation/> [Accessed 5 April 2020].

- Martí-Parreño, J., Seguí-Mas, D. & Seguí-Mas, E., 2016. Teachers' attitude towards and actual use of gamification. *Procedia - Social and Behavioral Sciences*, 30(7), 682 - 688.
- Mohamad, S. N., Sazali, N. S. & Salleh, M. A. 2018. Gamification approach in education to increase learning. *International Journal of Humanities, Arts and Social Sciences*, 4(1), 22 - 32.
- Nacke, L. E. & Deterding, S., 2016. The maturing of gamification research. *Computers in Human Behaviour*, 450 - 545.
- O'Donovan, S., Gain, J. & Marais, P. 2013. A case study in the gamification of a university-level games development course. *Information Interfaces and Presentation*, 242-251.
- Pham, L., 2018. A review of advantages and disadvantages of three paradigms: positivism, interpretivism and critical inquiry. *School of Education*.
- Rabah, J., Cassidy, R. & Beauchemin, R. 2017. Gamification in education: real benefits or edutainment?. *Proceedings of the European Conference on e-Learning*, 486 - 496.
- Reuters, 2019. *ESPN to launch its own collegiate video game sports championship*. [Online] Available at: <https://www.reuters.com/article/us-walt-disney-espn-esports/espn-to-launch-its-own-collegiate-video-game-sports-championship-idUSKBN1QT2SQ> [Accessed 21 November 2019].
- ReviseSociology, 2015. Positivism and Interpretivism in social research. *A level sociology revision*.
- Sailer, M., Hense, J. U., Mayr, S. K. & Mandl, H., 2016. How gamification motivates: An experimental study of the effects of specific game design elements on psychological need satisfaction. *Computers in Human Behavior*, Volume 69, 371-380.
- Scepanovic, S. & Zaric, N. 2015. Gamification in higher education learning - state of the art, challenges and opportunities. *The Sixth International Conference on e-Learning*.
- The Good Schools Guide, 2019. *What are the advantages of gamification in education?*. [Online] Available at: [What are the advantages of gamification in education?](#) [Accessed 21 November 2019].
- The IIE, 2020. Introduction to academic and digital literacies. *IADL5111 Module Guide*, Issue Unpublished.
- Varannai, I., Sasvari, P. & Urbanovics, A. 2017. The use of gamification in higher education: an empirical study. *International Journal of Advanced Computer Science and Applications*, 8(10), 1-6.
- WePC, 2019. *2019 Video game industry statistics, trends & data*. [Online] Available at: <https://www.wepc.com/news/video-game-statistics/> [Accessed 21 November 2019].
- Yildirim, I. 2017. Students' perceptions about gamification of education: a q-method. *Education and Science - TedMem*, 42(191), 235 - 246.

13.3 Appendix C: The Questionnaire

Gamification

Dear IADL student,

My name is Nicolaas van Reede van Oudtshoorn and I am a student at the IIE. I am currently conducting research under the supervision of Clodagh Mannion-nash about the impact of applying Gamification in the Higher Education classroom. I hope that this research will enhance our understanding of the potential benefits of Gamification on students' motivation and classroom participation.

I would like to invite you to participate in my study. In order to explain to you what your participation in my study will involve, I have formulated questions that I will try to fully answer so that you can make an informed decision about whether or not to participate. If you have any additional questions that you feel are not addressed or explained in this information sheet, please do not hesitate to ask me for more information. Once you have read and understood all the information contained in this sheet and are willing to participate, please complete and sign the consent form below.

What will I be doing if I participate in your study?

I would like to invite you to participate in this research because it could help students engage better with coursework. If you decide to participate in this research, I would like to apply elements of gamification in the class and to current elements of the module.

You can decide whether or not to participate in this research. If you decide to participate, you can choose to withdraw at any time or to decide not to answer particular questions.

Are there any risks/ or discomforts involved in participating in this study?

Whether or not you decide to participate in this research, there will be no negative impact on you. There are no direct risks or benefits to you if you participate in this study. You might, however, indirectly find that it is helpful to talk about your experience with Gamification. If you find at any stage that you are not comfortable with the line of questioning, you may withdraw or refrain from participating.

Do I have to participate in the study?

- Your inclusion in this study is completely voluntary;
- If you do not wish to participate in this study, you have every right not to do so;
- Even if you agree to participate in this study, you may withdraw at any time without having to provide an explanation for your decision

What will happen to the information that participants provide?

Once I have finished all questionnaires, I will write summaries to be included in my research report, which is a requirement to complete my Post Graduate Diploma in Higher Education. You may ask me to send you a summary of the research if you are interested in the final outcome of the study.

What happens if I have more questions about the study?

Please feel free to contact me or my supervisor should you have any questions or concerns about this research, or if there is anything you need to know before you decide whether or not to participate.

You should not agree to participate unless you are completely comfortable with the procedures followed.

1. Do you agree to participate in the research conducted by Nicolaas van Reede van Oudtshoorn about the impact of Gamification on the Higher Education classroom? This research has been explained to you and you understand what participation in this research will involve. I understand that: 1. You agree to be questioned for this research. 2. Your confidentiality will be ensured. Your name and personal details will be kept private. 3. Your participation in this research is voluntary and have the right to withdraw from the research at any time. There will be no repercussions should I choose to withdraw from the research. 4. You may choose not to answer any of the questions that are asked during the research interview. 5. You may be quoted directly when the research is published, but your identity will be protected. *

Tick all that apply.

☐ Yes, I have read and agree with the conditions.

2. Where you present on the day of the Kahoot Quiz ICE Task for IADL with Mr Nick? *

Mark only one oval.

☐ Yes

☐ No

3. Name & Surname *

Questions

Please answer the following quick questions about your experience with gamification.
For scaled questions, 1 would be the lowest and 5 the highest

4. Did you enjoy the gamification elements introduced into the IADL subject (Like the Kahoot Quizzes) *

Mark only one oval.

1 2 3 4 5
Did not enjoy ☐ ☐ ☐ ☐ ☐ Enjoyed very much

5. Did you find that you remembered the content of a test more if it was done in Kahoot Quiz form? *

Mark only one oval.

1 2 3 4 5
Did not remember ☐ ☐ ☐ ☐ ☐ Rememberd very well

6. Did competing with your classmates inspire you to get the answers right in the Kahoot Quiz? *

Mark only one oval.

1 2 3 4 5
The competition was not good ☐ ☐ ☐ ☐ ☐ The competition was great

7. Would the addition of Gamification have an influence on whether you attend class or not? *

Mark only one oval.

	1	2	3	4	5	
No, it would not influence me	☐	☐	☐	☐	☐	Yes, it would encourage me to go to class

8. Did it help to receive immediate feedback after each Quiz question?

Mark only one oval.

	1	2	3	4	5	
It didn't really help	☐	☐	☐	☐	☐	It helped a lot!

9. What suggestions, comment or critiques do you have about the addition of Gamification in the classroom? *

Thank you

Thank you so much for your participation, I really appreciate it - Mr Nick

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Google Forms

13.4 Appendix C: Questionnaire Responses

Timestamp	Do you agree to participate in the research conducted by Nicolaas van Reede van Oudstroom about the impact of Gamification on the Higher Education classroom? This research has been explained to you and you understand what participation in this research will involve. I understand that: 1. You agree to be questioned for this research. 2. Your confidentiality will be ensured. Your name and personal details will be kept private. 3. Your participation in this research is voluntary and have the right to withdraw from the research at any time. There will be no repercussions should I choose to withdraw from the research. 4. You may choose not to answer any of the questions that are asked during the research interview. 5. You may be quoted directly when the research is published, but	Where you present on the day of the Kahoot Quiz (Like the IADL with Mr Nick?)	Did you enjoy the gamification elements introduced into the subject (Like the Kahoot Quizzes)	Did you find that remembered content of a test more if it was done in Kahoot Quiz form?	Did competing with your classmates inspire you to get the answers right in the Kahoot Quiz?	Would the addition of Gamification have an influence on whether you attend class or not?	Did it help to receive immediate feedback after each Quiz question?	What suggestions, comment or critiques do you have about the addition of Gamification in the classroom?
5/27/2020 11:58:33	Yes, I have read and agree with the conditions.	Yes	5	3	4	5	3	What suggestions, comment or critiques do you have about the addition of Gamification in the classroom?
5/27/2020 12:00:29	Yes, I have read and agree with the conditions.	Yes	5	4	5	5	5	Good job sir, it helped greatly We should have more gamification maybe every week
5/27/2020 12:11:46	Yes, I have read and agree with the conditions.	Yes	5	5	5	5	5	When you play games on work you've done, you would be motivated to study harder so that you could come out first in all the games
5/27/2020 12:14:06	Yes, I have read and agree with the conditions.	Yes	5	4	4	3	4	I enjoyed the elements of gamification alot
5/27/2020 12:18:42	Yes, I have read and agree with the conditions.	Yes	5	4	5	5	5	None
5/27/2020 12:19:51	Yes, I have read and agree with the conditions.	Yes	4	2	5	4	4	Do not have at the moment
5/27/2020 12:20:01	Yes, I have read and agree with the conditions.	Yes	5	4	4	4	4	No comment (??)
5/27/2020 12:21:40	Yes, I have read and agree with the conditions.	Yes	5	5	5	4	5	It's a lot of fun and is a very good idea to keep us entertained
5/27/2020 12:21:55	Yes, I have read and agree with the conditions.	Yes	5	5	5	5	5	We should do more of Gamification
5/27/2020 12:24:18	Yes, I have read and agree with the conditions.	Yes	3	4	4	4	5	I would ask the lecturer to encourage gamification more often because the students will become more engaged into the lecture and more students will join the class. It is a good way to instill the knowledge by using gamification due to technology evolving today. More should be done, at least once after every new topic. It's been very helpful
5/27/2020 12:25:31	Yes, I have read and agree with the conditions.	Yes	5	4	5	5	5	None
5/27/2020 12:31:43	Yes, I have read and agree with the conditions.	Yes	5	5	4	5	5	I love it!!
5/27/2020 12:33:18	Yes, I have read and agree with the conditions.	Yes	5	4	5	5	5	It would be a great idea to have Gamification
5/27/2020 12:46:56	Yes, I have read and agree with the conditions.	Yes	5	5	5	5	5	I love it!!
5/27/2020 12:52:51	Yes, I have read and agree with the conditions.	Yes	5	4	4	5	5	
5/27/2020 13:00:35	Yes, I have read and agree with the conditions.	Yes	5	5	5	5	5	I really enjoyed it and it makes everything easy to recall
5/27/2020 13:02:05	Yes, I have read and agree with the conditions.	Yes	5	5	5	5	5	
5/27/2020 13:09:11	Yes, I have read and agree with the conditions.	Yes	5	5	5	5	5	I strongly believe that the gamification is very effective in a classroom. Learners stay focus throughout the quiz while we learn and have fun!
5/27/2020 13:17:22	Yes, I have read and agree with the conditions.	Yes	5	5	5	5	5	Theres nothing to add it works well
5/27/2020 13:31:10	Yes, I have read and agree with the conditions.	Yes	5	5	5	4	5	Nothing really just that its an amazing idea
5/27/2020 13:37:27	Yes, I have read and agree with the conditions.	Yes	5	5	5	5	5	The are no suggestions, really enjoyed the gamification method
5/27/2020 15:43:59	Yes, I have read and agree with the conditions.	Yes	5	4	5	5	5	None
5/27/2020 17:56:32	Yes, I have read and agree with the conditions.	Yes	5	4	5	4	5	None
5/27/2020 20:58:02	Yes, I have read and agree with the conditions.	Yes	5	5	5	4	5	Gamifications in class rooms are fun and are a great way to learn as students compete against each other (competition is healthy) and knowledge is easily processed into the brain as well and it gets easier to remember information. More of these should definitely be encouraged.
5/28/2020 13:18:22	Yes, I have read and agree with the conditions.	Yes	5	3	5	5	5	It's really fun and keeps us active in class
5/28/2020 19:29:10	Yes, I have read and agree with the conditions.	Yes	5	4	5	5	5	We should have more Gamification implemented in our studies
5/29/2020 17:50:53	Yes, I have read and agree with the conditions.	Yes	5	4	5	5	5	We should have more Gamification implemented in our studies